

## Sequence alignment for 10/560,322

RESULT 1

US-09-850-948-2

; Sequence 2, Application US/09850948

; Patent No. 6919176

; GENERAL INFORMATION:

; APPLICANT: Yang, Jianxin

; APPLICANT: An, Songzhu

; APPLICANT: Tularik Inc.

; TITLE OF INVENTION: Polypeptides and Nucleic Acids Associated With Cancer

; FILE REFERENCE: 018781-008300US

; CURRENT APPLICATION NUMBER: US/09/850,948

; CURRENT FILING DATE: 2001-05-07

; NUMBER OF SEQ ID NOS: 29

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 2

; LENGTH: 362

; TYPE: PRT

; ORGANISM: Homo sapiens

; FEATURE:

; OTHER INFORMATION: human G-protein coupled receptor 4 (GPR4)

US-09-850-948-2

Query Match 98.7%; Score 1907; DB 2; Length 362;

Best Local Similarity 98.9%; Pred. No. 4.5e-185;

Matches 358; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

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Qy      1 MGNHTWEGCHVDSRVDHLHPPSLYIFVIGVGLPTNCLALWAAYRQVQQRNQLGVYLMNLS 60
      |||
Db      1 MGNHTWEGCHVDSRVDHLFPSPSLYIFVIGVGLPTNCLALWAAYRQVQQRNELGVYLMNLS 60

Qy     61 IADLLYICTLPLWVDYFLHHDNWIHGP GSCKLP GFIFYTNIYISIAFLCCISVDRYLAVA 120
      |||
Db     61 IADLLYICTLPLWVDYFLHHDNWIHGP GSCKLP GFIFYTNIYISIAFLCCISVDRYLAVA 120

Qy    121 HPLRFARLRRVKTAVAVSSV VWATELGANSAPLFHDELFRDRYNHTFCFEKFPMEGWVAW 180
      |||
Db    121 HPLRFARLRRVKTAVAVSSV VWATELGANSAPLFHDELFRDRYNHTFCFEKFPMEGWVAW 180

Qy    181 MNLYRVFVGFLFPWALMLLSYRGILRAVRGSVSTERQE KAKIKRLALSLIAIVLVCFAPY 240
      |||
Db    181 MNLYRVFVGFLFPWALMLLSYRGILRAVRGSVSTERQE KAKIKRLALSLIAIVLVCFAPY 240

Qy    241 HVLLLSRSAIYLGRP WDCGFEERVFSAYHSSLAFTSLN CVADPILYCLVNEGARS DVAKA 300
      |||
Db    241 HVLLLSRSAIYLGRP WDCGFEERVFSAYHSSLAFTSLN CVADPILYCLVNEGARS DVAKA 300

Qy    301 LHNLLRFLASDKPQEMANASLTLETPLTSKR NSTAKAMTGSWAATPPSEGDQVQLKMLPP 360
      |||
Db    301 LHNLLRFLASDKPQEMANASLTLETPLTSKR NSTAKAMTGSWAATPPSQGDQVQLKMLPP 360

Qy    361 AQ 362
      ||
Db    361 AQ 362
```

Result 2

US-10-267-811-2

; Sequence 2, Application US/10267811  
 ; Publication No. US20030109044A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Logan, Thomas Joseph  
 ; APPLICANT: Galvin, Katherine M.  
 ; TITLE OF INVENTION: METHODS OF USING 279, A HUMAN G  
 ; TITLE OF INVENTION: PROTEIN-COUPLED PROTEIN RECEPTOR  
 ; FILE REFERENCE: MPI01-227P1RM  
 ; CURRENT APPLICATION NUMBER: US/10/267,811  
 ; CURRENT FILING DATE: 2002-10-09  
 ; PRIOR APPLICATION NUMBER: 60/329,648  
 ; PRIOR FILING DATE: 2001-10-16  
 ; NUMBER OF SEQ ID NOS: 3  
 ; SOFTWARE: FastSEQ for Windows Version 4.0  
 ; SEQ ID NO 2  
 ; LENGTH: 362  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapien  
 US-10-267-811-2

Query Match 98.7%; Score 1907; DB 4; Length 362;  
 Best Local Similarity 98.9%; Pred. No. 5.1e-175;  
 Matches 358; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

|    |     |  |     |
|----|-----|--|-----|
| Qy | 1   | MGNHTWEGCHVDSRVDHLHPPSLYIFVIGVGLPTNCLALWAAAYRQVQQRNQLGVYLMNLS    | 60  |
|    |     |  |     |
| Db | 1   | MGNHTWEGCHVDSRVDHLFPSPSLYIFVIGVGLPTNCLALWAAAYRQVQQRNELGVYLMNLS   | 60  |
| Qy | 61  | IADLLYICTLPLWVDYFLHHDNWIHGP GSCKLPGFIFYTNIYISIAFLCCISVDRYLAVA    | 120 |
|    |     |  |     |
| Db | 61  | IADLLYICTLPLWVDYFLHHDNWIHGP GSCKLPGFIFYTNIYISIAFLCCISVDRYLAVA    | 120 |
| Qy | 121 | HPLRFARLRRVKTAVAVSSV VWATELGANSAPLFHDELFRDRYNHTFCFEKFPMEGWAW     | 180 |
|    |     |  |     |
| Db | 121 | HPLRFARLRRVKTAVAVSSV VWATELGANSAPLFHDELFRDRYNHTFCFEKFPMEGWAW     | 180 |
| Qy | 181 | MNLYRVFVGF LFPWALMLLSYRGILRAVRGSVSTERQE KAKIKRLALSIAIVLVC FAPY   | 240 |
|    |     |  |     |
| Db | 181 | MNLYRVFVGF LFPWALMLLSYRGILRAVRGSVSTERQE KAKIKRLALSIAIVLVC FAPY   | 240 |
| Qy | 241 | HVLLLSRS AIYLGRP WDCGFEERVFSAYHSSLAFTSLN CVADPILYCLVNEGARS DVAKA | 300 |
|    |     |  |     |
| Db | 241 | HVLLLSRS AIYLGRP WDCGFEERVFSAYHSSLAFTSLN CVADPILYCLVNEGARS DVAKA | 300 |
| Qy | 301 | LHNLLRFLASDKPQEMANASLTLETPLTSKR NSTAKAMTG SWAATPPSEGDQVQLKMLPP   | 360 |
|    |     |  |     |
| Db | 301 | LHNLLRFLASDKPQEMANASLTLETPLTSKR NSTAKAMTG SWAATPPSQGDQVQLKMLPP   | 360 |
| Qy | 361 | AQ   | 362 |
|    |     |  |     |
| Db | 361 | AQ   | 36  |

RESULT 3

A57641

G protein-coupled receptor 4 - human

C;Species: Homo sapiens (man)

C;Date: 08-Feb-1996 #sequence\_revision 08-Feb-1996 #text\_change 09-Jul-2004

C;Accession: A57641

R;Mahadevan, M.S.; Baird, S.; Bailly, J.E.; Shutler, G.G.; Sabourin, L.A.;

Tsilfidis, C.; Neville, C.E.; Narang, M.; Korneluk, R.G.

Genomics 30, 84-88, 1995

A;Title: Isolation of a novel G protein-coupled receptor (GPR4) localized to chromosome 19q13.3.  
A;Reference number: A57641; MUID:96129306; PMID:8595909  
A;Accession: A57641  
A;Status: preliminary  
A;Molecule type: DNA  
A;Residues: 1-362 <MAH>  
A;Cross-references: UNIPROT:P46093; UNIPARC:UPI0000050428; GB:U21051;  
NID:g687793; PIDN:AAA98457.1; PID:g687794  
C;Genetics:  
A;Gene: GDB:GPR4  
A;Cross-references: GDB:371710; OMIM:600551  
A;Map position: 19q13.3-19q13.3  
A;Introns: #status absent  
C;Superfamily: G protein-coupled receptor 4  
C;Keywords: G protein-coupled receptor

Query Match 98.7%; Score 1907; DB 2; Length 362;  
Best Local Similarity 98.9%; Pred. No. 1.6e-170;  
Matches 358; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

|    |     |   |     |
|----|-----|---|-----|
| Qy | 1   | MGNHTWEGCHVDSRVDHLHPPSLYIFVIGVGLPTNCLALWAAAYRQVQQRNQLGVYLMNLS   | 60  |
|    |     |   |     |
| Db | 1   | MGNHTWEGCHVDSRVDHLFPSPSLYIFVIGVGLPTNCLALWAAAYRQVQQRNELGVYLMNLS  | 60  |
| Qy | 61  | IADLLYICTLPLWVDYFLHHDNWIHGP GSCKLPGFIFYTNIYISIAFLCCISVD RYLAVA  | 120 |
|    |     |   |     |
| Db | 61  | IADLLYICTLPLWVDYFLHHDNWIHGP GSCKLPGFIFYTNIYISIAFLCCISVD RYLAVA  | 120 |
| Qy | 121 | HPLRFARLRRVKTAVAVSSV VWATELGANSAPLFHDELFRDRYNHTFCFEKFPMEGWAW    | 180 |
|    |     |   |     |
| Db | 121 | HPLRFARLRRVKTAVAVSSV VWATELGANSAPLFHDELFRDRYNHTFCFEKFPMEGWAW    | 180 |
| Qy | 181 | MNLYRVFVGFLFPWALMLLSYRGILRAVRGSVSTERQE KAKIKRLALS LIAIVLVC FAPY | 240 |
|    |     |   |     |
| Db | 181 | MNLYRVFVGFLFPWALMLLSYRGILRAVRGSVSTERQE KAKIKRLALS LIAIVLVC FAPY | 240 |
| Qy | 241 | HVLLLSRSAIYLGRP WDCGFEERVFSAYHSSLAFTSLNCVADPILYCLVNEGARS DVAKA  | 300 |
|    |     |   |     |
| Db | 241 | HVLLLSRSAIYLGRP WDCGFEERVFSAYHSSLAFTSLNCVADPILYCLVNEGARS DVAKA  | 300 |
| Qy | 301 | LHNLLRFLASDKPQEMANASLTLETPLTSKRNSTAKAMTGSWAATPPSEGDQVQLKMLPP    | 360 |
|    |     |   |     |
| Db | 301 | LHNLLRFLASDKPQEMANASLTLETPLTSKRNSTAKAMTGSWAATPPSQGDQVQLKMLPP    | 360 |
| Qy | 361 | AQ  | 362 |
|    |     |   |     |
| Db | 361 | AQ  | 362 |